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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,437	01/20/2004	Masoud Medizade	PET 2.001.US	9186

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EXAMINER	
SHECHTMAN, SEAN P	

ART UNIT	PAPER NUMBER
2121	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/760,437	MEDIZADE ET AL.	
	Examiner	Art Unit	
	Sean P. Shechtman	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31 and 35-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31 and 35-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 objected to because of the following informalities: referring to claim 1, line 6, “an sensing element" should be “a sensing element”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 11, 21, 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claims 1, 11, 37, it is unclear how a sensing element is A/D converted.

Claims 21, 37, recites the limitation "said sensing element" in for example, claim 21, line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3, 5, 7-10, 12, 15-21, 24-31, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,006,044 to Walker, Sr. et al (hereinafter referred to as Walker), provided by applicant.

Referring to claim 1, 12, 21, 35, Walker teaches a method for monitoring and optimizing fluid extraction from geological strata comprising:

coupling a flow transducer to a check valve operatively coupled to a discharge conduit associated with a walking beam type pumping unit (Col. 22, line 56 – Col. 23, line 14; Fig. 1A), wherein said flow transducer is adapted to generate flow signals by detecting movement of a sensing element associated with said check valve (Fig. 2, element 48; Figs. 3-6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21; Col. 23, lines 15- Col. 25, line 65, sensing element 158),

electromagnetically coupling said flow transducer to a local processing system (Fig. 12, fluid sensor microprocessor),

monitoring said flow signals and sensing element at least during operation of said pump (Col. 55, lines 39-42),

A/D conversion of said flow signals and sensing element to create flow signal data (Fig. 12, A/D converter);

accumulating at least a portion of said flow signal data in a memory associated with said local processing system (Col. 55, lines 6-24; Col. 56, lines 33-62), and

determining an optimum pumping cycle from said accumulated flow signal data (Col. 23, lines 44-50; Col. 55, lines 34-55, Col. 56, lines 49-62),

wherein said optimum pumping cycle eliminates fluid pound (Col. 1, lines 13-30, optimum production; Col. 13, lines 1-23, optimum production is to be maintained by a mechanical pump without the adverse effects of fluid pounding or cavitation, then it is essential that a proper "rest time" be selected for programming into the motor control

device that is used to regulate the duty cycle of downhole equipment…For this reason, it is imperative that the total daily "rest time" of any pump be limited in duration and uniformly distributed throughout each 24 hour operating period; Col. 17, lines 1-12, control of rest period; Col. 33, lines 47 – Col. 35, line 2).

3, 16, 17, 21. The method according to claim 1 further including; electromagnetically coupling a motor controller associated with said pump to said local processing system, generating a control signal if said flow signals fall outside a predetermined range or predetermined set point, and sending said control signal to said motor controller; wherein said motor controller changes an operating state of said pump upon receipt of said control signal (Fig. 2, motor control; Col. 22, lines 56-68).

5, 15. The method according to claim 1 wherein said flow transducer generates said flow signals based at least in part on one of, variable reluctance effects, Hall effects, magnetic inductance effects, binary switch states, potentiometer outputs or piezoelectric effects (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21).

7, 18, 25. The method according to claim 3 wherein said operating state includes turning said pump on or off (Col. 55, lines 34-55, Col. 56, lines 49-62).

8, 19. The method according to claim 3 wherein said predetermined range includes low or loss of fluid flow (Col. 55, lines 34-55, Col. 56, lines 49-62).

9, 20. The method according to claim 3 wherein said predetermined set point includes a flow duration in which said pump has been operating or idle (Col. 55, lines 34-55, Col. 56, lines 49-62).

10. The method according to claim 1 wherein said position detectable element of said check valve includes means for stimulating said flow transducer to generate said flow signals coincident with said movement (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21).

Referring to claims 12, 21, Walker teaches a flow transducer coupled to a check valve and adapted to generate flow signals by detection of flow induced movement of a position detectable element internal to said check valve (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21), wherein said check valve is operatively coupled to a discharge conduit associated with a positive displacement pump (Col. 16, lines 44-67).

24. The system according to claim 21 wherein said position detectable element includes at least one permanent magnet attached thereto and configured to stimulate said flow transducer to generate said flow signals coincident with flow induced movement of said position detectable element (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21).

26. The system according to claim 25 wherein said optimum pumping cycle is used to at least modify said programmed pumping cycle (Col. 56, lines 6-63).

27. The system according to claim 25 wherein said programmed pumping cycle is modified manually by an operator (Fig. 2, manual input controls).

28. The system according to claim 25 wherein said programmed pumping cycle is modified automatically by either said local processing system (Col. 56, lines 6-63).

30. The system according to claim 21 where said transferring occurs automatically based at least in part on one of; time, in response to a transfer request or in response to an event (Fig. 2, Col. 22, lines 56-68).

31. The system according to claim 21 wherein said control command is generated based at least in part on one of: time or in response to an event (Fig. 2, motor control; Col. 22, lines 56-68).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 2,4,6,11,13,14,22,23,36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker in view of U.S. Pub. No. 2002/0017399 to Schultz et al (hereinafter referred to as Schultz) or under 35 U.S.C. 103(a) as being unpatentable over Walker as applied to claims 1, 3, 5, 7-10, 12, 15-21, 24-31, 35 above, and further in view of Schultz.

Referring to claim 11, Walker teaches a method for monitoring and optimizing fluid extraction from geological strata comprising:

coupling a flow transducer to a check valve operatively coupled to a discharge conduit associated with a walking beam type pumping unit (Col. 22, line 56 – Col. 23, line 14; Fig. 1A), wherein said flow transducer is adapted to generate flow signals by detecting movement of a sensing element associated with said check valve (Fig. 2, element 48; Figs. 3-6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21; Col. 23, lines 15- Col. 25, line 65, sensing element 158),

electromagnetically coupling said flow transducer to a local processing system (Fig. 12, fluid sensor microprocessor),

monitoring said flow signals and sensing element at least during operation of said pump (Col. 55, lines 39-42),

A/D conversion of said flow signals and sensing element to create flow signal data (Fig. 12, A/D converter);

accumulating at least a portion of said flow signal data in a memory associated with said local processing system (Col. 55, lines 6-24; Col. 56, lines 33-62), and

determining an optimum pumping cycle from said accumulated flow signal data (Col. 23, lines 44-50; Col. 55, lines 34-55, Col. 56, lines 49-62),

wherein said optimum pumping cycle eliminates fluid pound (Col. 1, lines 13-30, optimum production; Col. 13, lines 1-23, optimum production is to be maintained by a mechanical pump without the adverse effects of fluid pounding or cavitation, then it is essential that a proper "rest time" be selected for programming into the motor control device that is used to regulate the duty cycle of downhole equipment…For this reason, it is imperative that the total daily "rest time" of any pump be limited in duration and uniformly distributed throughout each 24 hour operating period; Col. 17, lines 1-12, control of rest period; Col. 33, lines 47 – Col. 35, line 2).

Referring to claims 2, 4, 6, 11, 13, 14, 22, 23, 36-38, Walker teaches all of the limitations set forth above, however fails to teach another processing system is in processing communications over a network with at least a local processing system and

includes means for; receiving accumulated flow signals from said network; retrievably storing at least a portion of said accumulated flow signals in a data store; determining an optimum pumping cycle from said accumulated flow signals; generating control command; sending said control command to at least said local processing system; and outputting said optimum pumping cycle in a format useful for optimizing fluid extraction from said geological strata using the pump; wherein said another processing system further includes means for heuristically determining said optimum pumping cycle; wherein said transferring is accomplished using an electronic transport medium, wherein said electronic transport medium comprises one of, a telecommunications link, a laptop computer, a personal data assistant, or a data logging device (Page 3, paragraph 44; Page 4, paragraph 52; Page 4, paragraph 49; Pages 5-6, claim 14).

However, referring to claims 2, 4, 6, 11, 13, 14, 22, 23, 36-38, Schultz teaches another processing system is in processing communications over a network with at least a local processing system and includes means for; receiving accumulated flow signals from said network; retrievably storing at least a portion of said accumulated flow signals in a data store; determining an optimum pumping cycle from said accumulated flow signals; generating control command; sending said control command to at least said local processing system; and outputting said optimum pumping cycle in a format useful for optimizing fluid extraction from said geological strata using the pump; wherein said another processing system further includes means for heuristically determining said optimum pumping cycle; wherein said transferring is accomplished using an electronic transport medium, wherein said electronic transport medium comprises one

of, a telecommunications link, a laptop computer, a personal data assistant, or a data logging device (Page 3, paragraph 44; Page 4, paragraph 52; Page 4, paragraph 49; Pages 5-6, claim 14).

Walker and Schultz are analogous art because they are from the same field of endeavor, well production.

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the system of Walker, with the remote access and control system of Schultz.

One of ordinary skill in the art would have been motivated to combine these references, because Schultz teaches the webserver 234 supports a web page on the Internet 246, which may be accessed by a person at a remote location with a connection to the Internet and n this manner, the person at the remote location may monitor the signals generated by the sensors 236, 238, 240 and may operate the test equipment 244 to thereby test the functionality of the well tool 228 and/or diagnose a problem encountered in testing the tool (Page 5, paragraph 67). Furthermore, Schultz teaches a well monitoring and control system is provided which utilizes the Internet or other network to permit remote monitoring and control of aspects of the well (paragraph 6). Furthermore, Schultz teaches a well tool is provided that includes a sensor and/or an actuator, wherein if a sensor is used, signals generated by the sensor are accessible at a remote location via the network and if an actuator is used, the actuator is controllable from the remote location via the network, such that multiple well tools may be used in a well and the well tools may be independently monitored and/or controlled

via a network connected to the webserver (paragraphs 7-8). Furthermore, Schultz teaches surface equipment associated with a well may be monitored and/or controlled from a remote location using a system provided herein (paragraph 9). Furthermore, Schultz teaches a well tool may be tested from a remote location using a system and method provided herein, such that test equipment maybe operated remotely, for example, to apply pressure to the tool, via the network. Furthermore, Schultz teaches various methods may be utilized for communicating between the webserver and the network, wherein if a fiber optic line is used, a cable is provided that is uniquely suited for use in a subterranean well (paragraphs 10-12).

Response to Arguments

5. Applicant's arguments filed 2/6/09 have been fully considered but they are not persuasive.

Applicant continues to argue that Walker fails to teach accumulating at least a portion of the signal for determining pump off control, since Walker teaches the entire signal is accumulated. The examiner respectfully disagrees. The examiner respectfully submits that an entirety is at least a portion because an entirety is at least a subset of an entirety. Furthermore, since Walker teaches the entire signal is accumulated, a portion must be accumulated since an entirety includes all subsets.

Applicant argues that Walker does not teach a sensing element in the check valve. The examiner respectfully disagrees. Walker teaches sensing element 158 inside the check valve of Figs. 3-6 (Col. 23, lines 15 – Col. 24, line 56).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a sensing element separate and distinguishable from the flow transducer; programmatically altered; a flexible computer controlled processor; processing system (that)... accumulates a portion of the digital flow signals in another portion of digital flow data in another portion of said first memory and transfer at least a portion to an electronic transport medium) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Referring to claim 12, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., fluid pound) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Referring to claims 2, 4, 6, 11, 13, 14, 22, 36-38, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., sensors located in a flow discharge valve; a surface flow discharge and monitoring system) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571)272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS
Sean P. Shechtman
April 12, 2009

/Sean P. Shechtman/
Primary Examiner, Art Unit 2121